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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/919,574	07/30/2001	Alberto Ginesi	020510-001900US	2616

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EXAMINER

LEE, JOHN J

ART UNIT	PAPER NUMBER
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2684

DATE MAILED: 05/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/919,574

Applicant(s)

GINESI ET AL.

Examiner

JOHN J LEE

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's arguments with respect to claims 1 – 27 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 1-11, 13-24, 26, and 27** are rejected under 35 U.S.C. 102(e) as being anticipated by Brown (US patent number 6,226,356).

Regarding **claim 1**, Brown discloses that a method of reducing power required for transmitting a signal from a first transceiver to a second transceiver (column 3, lines 45 – column 4, lines 28 and Fig. 1). Brown teaches that estimating at said first transceiver an excess amount of power used by said first transceiver for transmitting said signal (column 4, lines 29 – column 5, lines 39 and Fig. 2a, 2b, where teaches measurement circuit measures the line characteristics of the subscriber line, and control logic determines the transmission power required by the driver to drive a signal onto the subscriber line including utilizing mathematical equation or look-up tables). Brown teaches that reducing a power use of said first transceiver by said excess amount of power to a reduced power level (column 8, lines 11 – 52 and Fig. 2, 6, where teaches control logic determines the transmission power required by the driver to drive a signal onto the subscriber line

including utilizing mathematical equation or look-up tables and adjusts the transmission power of the DSL driver of the user interface). Brown teaches that transmitting said signal from said first transceiver using said reduced power level (column 8, lines 11 – 52 and Fig. 2, 6, where teaches control logic adjusts the transmission power of the DSL driver of the user interface), wherein said reduced power level achieves a transmission rate (determining sample rate) of said signal within a predefined tolerance of a target rate thereof (column 8, lines 11 – column 9, lines 20 and Fig. 6, 7 where teaches as determining transmission power and adjusting power achieve transmission sample rate within a predefined tolerance of a target rate (inherently setting up a predefined tolerance of a target rate by relationship with transmission power and transmission rate for making mathematical equation, look-up tables, or graphic for quality reception)).

Regarding **claim 2**, Brown discloses that the first transceiver is located at one of a central office and a remote loop carrier, and comprises a downstream transmitter and an upstream receiver, and wherein said second transceiver is located at an end user location and comprises an upstream transmitter and a downstream receiver (Fig. 1, 3, column 5, lines 41 – column 6, lines 43, and column 3, lines 45 – column 4, lines 28, where teaches the host interface is located at a central office and loop carrier, comprises downstream and upstream transceiver and user interface is located user location).

Regarding **claim 3**, Brown discloses that the excess amount of power for said signal is estimated in accordance with a measured value of upstream attenuation (line characteristic) (column 8, lines 11 – 52, Fig. 2, 6, and column 4, lines 29 – column 5, lines 39, where teaches control logic determines the transmission power required by the

driver to drive a signal onto the subscriber line including utilizing mathematical equation or look-up tables and adjusts the transmission power of the DSL driver of the user interface).

Regarding **claim 4**, Brown discloses that the measured value of upstream attenuation is calculated as a difference between a total transmit power transmitted from said upstream transmitter and a measured power of an upstream signal received at said upstream receiver (column 8, lines 11 – 52, Fig. 1, 2, and column 4, lines 29 – column 5, lines 39).

Regarding **claims 5 and 18**, Brown discloses that a value of said excess amount of power of said signal is associated with a value of said upstream attenuation in a table (column 4, lines 29 – column 5, lines 24 and Fig. 2, where teaches the amount of transmission power required to drive the signal can be determined in a variety of ways, including look-up table).

Regarding **claim 6**, Brown discloses that the first transceiver estimates per carrier signal-to-noise ratio (SNR) in accordance with bit-per-carrier, power-per-carrier, and SNR margin information received from said second transceiver (column 8, lines 28 – column 9, lines 20 and Fig. 6, 7, where teaches transceiver measures signal to noise in accordance with bit per carrier (rate , bandwidth), transmission power, and SNR information).

Regarding **claim 7**, Brown discloses that the first transceiver uses said bit per carrier information for estimating a rate of said signal and a rate of said signal transmitted at a selected reduced power level, for ensuring said transmission rate is maintained within

said predefined tolerance (column 8, lines 11 – column 9, lines 20 and Fig. 6, 7 where teaches as determining transmission power and adjusting power achieve transmission sample rate within a predefined tolerance of a target rate (inherently setting up a predefined tolerance of a target rate by relationship with transmission power and transmission rate for making mathematical equation, look-up tables, or graphic for quality reception))).

Regarding **claims 8 and 10**, Brown discloses that a second initialization is required for transmitting said signal at said reduced power level (column 8, lines 11 – column 9, lines 20 and Fig. 6, 7).

Regarding **claim 9**, Brown discloses that the first transceiver reduces said power in accordance with excess SNR provided by said second transceiver (column 8, lines 28 – column 9, lines 20, Fig. 6, 7, and column 5, lines 60 – column 6, lines 19).

Regarding **claim 11**, Brown discloses that the excess amount of power is estimated by estimating an excess amount of SNR at said second transceiver for said target rate (column 8, lines 11 – column 9, lines 20, Fig. 6, 7, and column 5, lines 60 – column 6, lines 19).

Regarding **claim 13**, Brown discloses all the limitation, as discussed in claim 1. Furthermore, Brown further discloses that calculating at said second transceiver an attainable reduced power level for said transmitted signal (column 4, lines 29 – column 5, lines 39 and Fig. 2, where teaches calculating at a transceiver an reduced power level for transmitting signal and adjusting the transmitting power level). Brown teaches that communicating said reduced power level between said second and first transceivers

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(column 4, lines 29 – column 5, lines 39 and Fig. 2), wherein said first transceiver adjusts its power level prior to a time period that would require a second initialization (column 6, lines 44 – column 7, lines 35 and Fig. 2, 4, where teaches adjusting transmission power level by automated procedure on time periodic basis).

Regarding **claim 14**, Brown discloses that the second transceiver indicates a power cutback implicitly by reducing power-per-carrier information

Regarding **claim 15**, Brown discloses all the limitation, as discussed in claims 1 and 13. Furthermore, Brown further discloses that for reducing power required for transmitting a signal from a central office asymmetric digital subscriber line (ADSL) termination unit (ATU-C) to a remote ADSL termination unit (ATU-R), wherein said ATU-C includes a processor for controlling said ATU-C to implement processing (Fig. 1, 3, column 4, lines 7 – 28, and column 5, lines 51 – column 6, lines 43, where teaches the host and user interface are ADSL interfaces with processor for controlling).

Regarding **claim 16**, Brown discloses all the limitation, as discussed in claims 3 and 15.

Regarding **claim 17**, Brown discloses all the limitation, as discussed in claims 4 and 15.

Regarding **claim 19**, Brown discloses all the limitation, as discussed in claims 6 and 15.

Regarding **claim 20**, Brown discloses all the limitation, as discussed in claims 7 and 15.

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Regarding **claim 21**, Brown discloses all the limitation, as discussed in claims 8 and 15.

Regarding **claim 22**, Brown discloses all the limitation, as discussed in claims 9 and 15.

Regarding **claim 23**, Brown discloses all the limitation, as discussed in claims 10 and 15.

Regarding **claim 24**, Brown discloses all the limitation, as discussed in claims 11 and 15.

Regarding **claim 26**, Brown discloses all the limitation, as discussed in claims 13 and 15.

Regarding **claim 27**, Brown discloses all the limitation, as discussed in claims 14 and 15.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 12 and 25** are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown in view of Goldstein (US Patent number 5,265,151).

Regarding **claims 12 and 25**, Brown does not specifically disclose the limitation “the first transceiver provides said second transceiver with a minimum SNR inflated by a

value N corresponding to said excess amount of power, and wherein said first transceiver transmits at a power level reduced by said value N if said second transceiver is capable of supporting said minimum SNR inflated by said value N". However, Goldstein discloses the limitation "the first transceiver provides said second transceiver with a minimum SNR inflated by a value N corresponding to said excess amount of power, and wherein said first transceiver transmits at a power level reduced by said value N if said second transceiver is capable of supporting said minimum SNR inflated by said value N" (column 5, lines 57 – column 6, lines 60 and Fig. 3, where teaches the second transceiver measures signal noise ratio (36/34 dB) from power of transmitted signal by first transceiver and compares with a minimum signal noise ratio (29.5 dB) for calculating a value (4dB) corresponding to the access amount of power). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Brown system as taught by Goldstein, provide the motivation to achieve an efficient transmission power control in Digital Data network.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Agah (US Patent number 6,370,187) discloses Adaptive Power Dissipation for Data Communications System.

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Hansen (US Patent number 6,690,768) discloses Power Cutback Configuration of Digital Subscriber Line Transceivers Using Public Switched Telephone Network Signaling.

Information regarding...Patent Application Information Retrieval (PAIR) system... at 866-217-9197 (toll-free)."

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed (703) 308-9051, (for formal communications intended for entry)

Or: (703) 308-6606 (for informal or draft communications, please label "PROPOSED" or "DRAFT").

Hand-delivered responses should be brought to USPTO Headquarters, Alexandria, VA.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John J. Lee** whose telephone number is **(571) 272-7880**. He can normally be reached Monday-Thursday and alternate Fridays from 8:30am-5:00 pm. If attempts to reach the examiner are unsuccessful, the examiner's supervisor, **Nay Aung Maung**, can be reached on **(571) 272-7882**. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-4700.

J.L
April 12, 2005


NAY MAUNG
SUPERVISORY PATENT EXAMINER

John J Lee